



- jfw 1751

DOCKET NO.: UPNA-0034/P2925

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Arjun G. Yodh, et al.

Confirmation No.: 7568

Application No.: 10/526,941

Group Art Unit: 1751

Filing Date: September 8, 2005

Examiner: Not Yet Assigned

For: CARBON NANOTUBES: HIGH SOLIDS DISPERSIONS AND NEMATIC
GELS THEREOF

DATE OF DEPOSIT: December 8, 2006

I HEREBY CERTIFY THAT THIS PAPER IS BEING
DEPOSITED WITH THE UNITED STATES POSTAL
SERVICE AS FIRST CLASS MAIL, POSTAGE PREPAID,
ON THE DATE INDICATED ABOVE AND IS
ADDRESSED TO THE UNITED STATES PATENT AND
TRADEMARK OFFICE, P.O. BOX 1450, ALEXANDRIA,
VA 22313-1450.

David M. De Santo

TYPED NAME: David M. De Santo

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 CFR § 1.56 and in accordance with 37 CFR §§ 1.97-1.98, information relating to the above-identified application is hereby disclosed. Inclusion of information in this statement is not to be construed as an admission that this information is material as that term is defined in 37 CFR § 1.56(b).

- ☒ In accordance with § 1.97(b), since this Information Disclosure Statement is being filed either within three months of the filing date of the above-identified application, within three months of the date of entry into the national stage of

the above identified application as set forth in § 1.491, before the mailing date of a first Office Action on the merits of the above-identified application, or before the mailing date of a first Office Action after the filing of request for continued examination under § 1.114, no additional fee is required.

- ☐ In accordance with § 1.97(c), this Information Disclosure Statement is being filed after the period set forth in § 1.97(b) above but before the mailing date of either a Final Action under § 1.116 or a Notice of Allowance under § 1.311, or before an action that otherwise closes prosecution in the application, therefore:

- ☐ Certification in Accordance with § 1.97(e) is attached; or
- ☐ The fee of \$180.00 as set forth in § 1.17(p) is attached.

- ☐ In accordance with § 1.97(d), this Information Disclosure Statement is being filed after the mailing date of either a Final Action under § 1.113 or a Notice of Allowance under § 1.311 but before, or simultaneously with, the payment of the Issue Fee, therefore included are: Certification in Accordance with § 1.97(e); and the submission fee of \$180.00 as set forth in § 1.17(p).

- ☒ Copies of reference numbers **168 - 204** listed on the attached Form PTO-1449 are enclosed herewith.

- ☒ Copies of reference numbers **149 - 167** on the attached Form PTO 1449 are not required to be submitted pursuant to 37 CFR § 1.98(a)(2)(i).

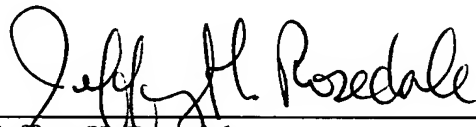
- ☐ Copies of references - are not being submitted because they were previously cited by or submitted to the U.S. Patent and Trademark Office in patent application number , filed for which a claim for priority under 35 U.S.C. § 120 has been made in the instant application.

- ☐ The relevance of those listed references which are not in the English language is as follows:

There are no listed references which are not in the English language.

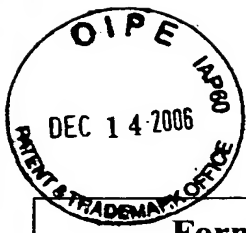
Please charge any deficiency or credit any overpayment to Deposit Account No. 23-3050. This form is submitted in duplicate.

Date: December 7, 2006



Jeffrey H. Rosedale
Registration No. 46,018

WOODCOCK WASHBURN LLP
One Liberty Place - 46th Floor
Philadelphia, PA 19103
Telephone: (215) 568-3100
Facsimile: (215) 568-3439



Form PTO-1449 Modified List of Patent and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Patent and Trademark Office	Docket No. UPNA-0034/P2952	Application No. 10/526,941
	Applicant Arjun G. Yodh, et al.	
	Filing Date September 8, 2005	Group 1751
	Confirmation No. 7568	

U. S. PATENT DOCUMENTS

Examiner Initial		Document No.	Date	Name	Class	Subclass
	149	5,908,585	06/01/99	Shibuta	252	506
	150	6,576,341 B1	06/10/03	Davey, et al.	428	376
	151	6,617,377 B2	09/09/03	Chacko	524	99
	152	6,689,835 B2	02/10/04	Amarasekera, et al.	524	495
	153	2002/0046872 A1	04/25/02	Smalley, et al.	174	137
	154	2002/0058743 A1	05/16/02	Tobita, et al.	524	495
	155	2002/0068170 A1	06/06/02	Smalley, et al.	428	403
	156	2002/0090501 A1	07/11/02	Tobita	428	297.4
	157	2002/0161101 A1	10/31/02	Carroll, et al.	524	495
	158	2002/0185770 A1	12/12/02	McKague	264	108
	159	2002/0197923 A1	12/26/02	Tobita, et al.	442	74
	160	2003/0077515 A1	04/24/03	Chen, et al.	429	231,8
	161	2003/0122111 A1	07/03/03	Glatkowski	252	500
	162	2003/0151030 A1	08/14/03	Gurin	252	502
	163	2003/0158323 A1	08/21/03	Connell, et al.	524	495
	164	2003/0164427 A1	09/04/03	Glatkowski, et al.	244	158 R
	165	2003/0216502 A1	11/20/03	McElrath, et al.	524	507
	166	2003/0236588 A1	12/25/03	Jang, et al.	700	119
	167	2004/0029706 A1	02/12/04	Barrera, et al.	501	99

EXAMINER	DATE CONSIDERED
-----------------	------------------------

Form PTO-1449 Modified List of Patent and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Patent and Trademark Office	Docket No. UPNA-0034/P2952	Application No. 10/526,941
	Applicant Arjun G. Yodh, et al.	
	Filing Date September 8, 2005	Group 1751
	Confirmation No. 7568	

FOREIGN PATENT DOCUMENTS

[illegible]

EXAMINER	DATE CONSIDERED
-----------------	------------------------

Form PTO-1449 Modified List of Patent and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Patent and Trademark Office		Docket No. UPNA-0034/P2952	Application No. 10/526,941
		Applicant Arjun G. Yodh, et al.	
		Filing Date September 8, 2005	Group 1751
		Confirmation No. 7568	
NON-PATENT DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
	173	Barraza, H.J., et al., "SWNT-filled thermoplastic and elastomeric composites prepared by miniemulsion polymerization," <i>Nano Letters, Am. Chem. Soc.</i> , 2002 , 797-802	
	174	Bhattacharyya, A.R., et al., "Crystallization and orientation studies in polypropylene/single wall carbon nanotube composite," <i>Polymer</i> , 2003 , 2373-2377	
	175	Biercuk, M.J., et al., "Carbon nanotube composites for thermal management," <i>Applied Physics Letters</i> , 2002 , 80(15), 2767-2769	
	176	Choi, E.S., et al., "Enhancement of thermal and electrical properties of carbon nanotube polymer composites by magnetic field processing," <i>J. of Applied Physics</i> , 2003 , 94(9), 6034-6039	
	177	Colbert, D.T., "Single-wall nanotubes: a new option for conductive plastics and engineering polymers," <i>Elsevier Science Ltd., Plastics Additives & Compounding</i> , January/February 2003 , 7 pages	
	178	Cooper, C.A., et al., "Distribution and alignment of carbon nanotubes and nanofibrils in a polymer matrix," <i>Composites Science & Technology</i> , 2002 , 62, 1105-1112	
	179	Du, F., et al., "Single-walled carbon nanotube/PMMA composites," <i>Session W26 – Focus Session: Carbon Nanotube Composites</i> , March 6, 2003 , 1 page	
	180	Haggenmueller, R., et al., "Production and characterization of polymer nanocomposites with highly aligned single-walled carbon nanotubes," <i>J. of Nanoscience & Nanotechnology</i> , 2003 , 3(1), 1-6	
	181	Haggenmueller, R., et al., "Aligned single-wall carbon nanotubes in composites by melt processing methods," <i>Chemical Physics Letters</i> , 2000 , 330, 219-225	
	182	Haggenmueller, R., et al., "Single-walled carbon nanotube/NYLON66 composites," <i>Session W26 – Focus Session: Carbon Nanotube Composites</i> , March 6, 2003 , 1 page	
	183	Haggenmueller, R., et al., "Processing and characterization of polymers containing single-wall carbon nanotubes," <i>Session V18 – Nanoparticles</i> , March 15, 2001 , 1 page	
	184	Haggenmueller, R., et al., "Single-walled carbon nanotube/polymer composite fibers," <i>MRS</i> , 2001 , 1 page	
	185	Haggenmueller, R., et al., "Mechanical and structural investigation of highly aligned single-walled carbon nanotubes in polymer composites," <i>MRS</i> , 2002 , 1 page	
	186	Haggenmueller, R., et al., "Thermoplastic/nanotube composite fibers," <i>Session M10 – Nanotubes and Related Materials: Applications</i> , March 22, 2000 1 page	

EXAMINER	DATE CONSIDERED
----------	-----------------

Form PTO-1449 Modified List of Patent and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Patent and Trademark Office		Docket No. UPNA-0034/P2952	Application No. 10/526,941
		Applicant Arjun G. Yodh, et al.	
		Filing Date September 8, 2005	Group 1751
		Confirmation No. 7568	
NON-PATENT DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
	187	Halford, B., "Acid route to nanotube fibers," <i>Chemical & Engineering News</i> , 2003 , 81(50), http://pubs.acs.org/cen/topstory/8150/8150notw7.html , downloaded from the internet on December 22, 2003, 2 pages	
	188	Kashiwagi, T., et al., "Thermal degradation and flammability properties of poly(propylene)/carbon nanotube composites," <i>Macromol. Rapid Commun.</i> , 2002 , 23, 761-765	
	189	Kelsey, W.D., "reu program final report," http://www.mse.arizona.edu/~reu-ret/pastreureports_1.htm , downloaded from the internet on February 24, 2004, 9 pages	
	190	Kim, B., et al., "Electrical properties of single-wall carbon nanotube and epoxy composites," <i>J. of Applied Physics</i> , 2003 , 94(10), 6724-6728	
	191	Liang, Z., et al., "Investigation of molecular interactions between (10,10) single-walled nanotube and Epon 862 resin/DETDA curing agent molecules," <i>Materials Science & Engineering A</i> , 2004 , 365, 228-234	
	192	Pötschke, P., et al., "Rheological behavior of multiwalled carbon nanotube/polycarbonate composites," <i>Polymer</i> , 2002 , 43, 3247-3255	
	193	Ramasubramaniam, R., et al., "Homogeneous carbon nanotube/polymer composites for electrical applications," <i>Applied Physics Letters</i> , 2003 , 84(14), 2928-2930	
	194	Rutkofsky, M., et al., "Using a carbon nanotube additive to make electrically conductive commercial polymer composites," <i>Zyvex Applications Note</i> , 2004 , 3 pages	
	195	Sandler, J.K.W., et al., "Ultra-low electrical percolation threshold in carbon-nanotube-epoxy composites," <i>Polymer</i> , 2003 , 44, 5893-5899	
	196	Schueler, R., "Agglomeration and electrical percolation behavior of carbon black dispersed in epoxy resin," <i>J. Appl. Polym. Sci.</i> , 1997 , 63, 1741-1746	
	197	Stéphan, C., et al., "Electrical properties of singlewalled carbon nanotubes-PMMA composites," <i>Am. Inst. Of Physics</i> , 2000 , 363-366	
	198	Thostenson, E.T., et al., "Aligned multi-walled carbon nanotube-reinforced composites: processing and mechanical characterization," <i>J. Phys. D: Appl. Phys.</i> , 2002 , 35, L77 – L80	
	199	Valentini, L., et al., "Morphological characterization of single-walled carbon nanotubes-PP composites," <i>Composites Science & Technology</i> , 2003 , 1149-1153	
	200	Session W26 – W26.013 – Focus Session: Carbon Nanotube Composites. March 6, 2003, 5 pages	

EXAMINER	DATE CONSIDERED
-----------------	------------------------

Form PTO-1449 Modified List of Patent and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Patent and Trademark Office	Docket No. UPNA-0034/P2952	Application No. 10/526,941
	Applicant Arjun G. Yodh, et al.	
	Filing Date September 8, 2005	Group 1751
	Confirmation No. 7568	

NON-PATENT DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	201	Session D1 – D32 Program Overview, March 18, 2002, 30 pages
	202	Session D9 – D9.015 – <i>Focus Session: Nanostructures in Polymers I.</i> , March 18, 2002, 6 pages
	203	Second Topical Conference on Nanoscale Science & Engineering, Indianapolis, November 3-8, 2002, 1 page
	204	Session M10 – M10.010– Nanotubes and Related Materials: Applications, March 22, 2002, 4 pages

EXAMINER	DATE CONSIDERED
-----------------	------------------------